

Abstract

Method for manufacturing a small particle diameter product of solid polymethylaluminoxane composition

The present invention relates to a solid polymethylaluminoxane composition of uniform particle diameter in the form of fine particles of less than 5 μm employed to polymerize olefins with high polymerization activity without silica, to a method for manufacturing thereof, to a polymerization catalyst, and to a method for manufacturing a polyolefin. The present invention relates to a solid polymethylaluminoxane composition: wherein the aluminum content falls within a range of 36 mass% to 43 mass%; wherein the mole fraction of methyl groups derived from trimethylaluminum moieties relative to the total number of mols of methyl groups is 12 mol% or less; and that is particulate, with the median diameter based on volume falling within a range of 0.1 μm to less than 5 μm . In a step of heating an aromatic hydrocarbon solution containing trimethylaluminum and the polymethylaluminoxane to cause solid polymethylaluminoxane composition to precipitate, prior to or during the heat treating step, a dry, inert gas is bubbled through.